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EXAMINER

SHEPELEV, KONSTANTIN

ART UNIT	PAPER NUMBER
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2131

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/534,478	Applicant(s) ADAMSON ET AL.	
	Examiner KONSTANTIN SHEPELEV	Art Unit 2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/10/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/14/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to application filed on May 10, 2005 in which claims 1-13 are presented for examination.

Status of Claims

Claims 1-13 are pending; of which claims 1 and 7 are in independent form. Claim 12 is rejected under 35 USC 112, 2nd. Claims 12 and 13 are rejected under 35 USC 101. Claims 1 and 7 are rejected under 35 USC 102(b). Claims 2-6 and 8-13 are rejected under 35 USC 103(a).

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Data storage system with access limiting connector for use in MP3 player.

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.

- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A “Sequence Listing” is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required “Sequence Listing” is not submitted as an electronic document on compact disc).

Applicant failed to clearly label the sections of the current specification.

3. The disclosure is objected to because it contains an embedded hyperlink or other form of browser-executable code. The hyperlink is found on page 9, line 27, of the current specification. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim is found to be indefinite because it depends on any claim from 7 to 11 which are directed to a method, while claim 12 is directed to a computer program.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 12 and 13 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 12 recites "a computer program" which is clearly a functional descriptive material, software, per se. When recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. However, the claim language lacks the necessary computer readable medium, and as such fails to fall within one of four statutory categories of invention according to 35 U.S.C. 101. Therefore, claim 12 is non-statutory.

Claim 13 is rejected as being dependent upon rejected claim 12.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Cane et al. (US 5,940,506).

With respect to claim 1, Cane discloses the limitation of “storage device arranged to communicate with an archival device and to upload a file thereto” (column 2, lines 55-58) as a source organization desiring to archive files periodically transfers files from its online repository [...] to the archive server.

Further, Cane discloses the limitation of “the storage device is arranged to generate a file encryption key and encrypt the file with the file encryption key” (column 3, lines 32-34) as an archive transaction for a file stored at the source system encompasses encryption of the file on the source system using a secondary key.

Furthermore, Cane discloses the limitation of “the file encryption key being regeneratable by the storage device upon presentation of the encrypted file” (column 2, lines 43-45) the source organization maintains the master key required to recover individual encrypted keys.

With respect to claim 7, Cane discloses the limitations of “generating a file encryption key” and “encrypting a file with the file encryption key” (column 3, lines 56-

57) as a key generator generates a secondary key [...] and uses this key to encrypt the file.

Further, Cane discloses the limitation of “uploading the encrypted file to an archival device” (column 3, lines 64-66) as the encrypted file and encrypted key are then transmitted to the archive server.

Furthermore, Cane discloses the limitations of “regenerating the file encryption key upon download of the encrypted file” and “decrypting the file with the regenerated file encryption key” (column 4, lines 46-51) as once received by the source system, the master key is used to decrypt the encrypted key and recover the secondary key. The secondary key is then used to decrypt the encrypted file to produce the recovered file which is identical to the original file.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cane et al. (US 5,940,506) in view of Horne et al. (US 4694,491).

With respect to claim 2, Cane teaches the limitation of “the storage device includes a private encryption key” (column 2, lines 43-45) the source device maintains only the master key required to recover the individual encrypted key.

Further, Cane teaches the limitation of “the file encryption key being generated in dependence on a randomly generated number and the private encryption key” (column 3, lines 59-60) as the master key is used to encrypt the secondary key, where (column 4, lines 4-5) encryption may be performed by any of various known methods, such as RSA. It is known in the art that RSA uses distinct large random prime numbers to as the seed to obtain the modulus for the private key.

It is noted, however, that Cane does not explicitly teach the limitation of “the randomly generated number (120) is stored in a header (410) to the file (30) upon uploading.”

On the other hand Horne discloses the abovementioned limitation (column 7, lines 62-64) as the encryption key number I transmitted to all receivers at the same time in the header portion of the control data stream.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to incorporate teachings of Horne into the system of Cane to efficiently transmit the key data associated with the encrypted file.

With respect to claim 8, it is rejected in view of the same reasons as stated in the rejection of claim 2.

With respect to claim 11, it is rejected in view of the same reasons as stated in the rejection of claim 2.

6. Claims 3, 4, 5, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cane et al. (US 5,940,506) in view of Madoukh (US 2001/0019614 A1).

With respect to claim 3, Cane does not explicitly teach the limitation of teaches the limitation of “the storage device includes a private encryption key and a file encryption key database, the file encryption key being generated in dependence on the private encryption key, wherein data necessary to generate a decryption key to decrypt the encrypted file is written to the file encryption key database upon uploading.”

On the other hand, Madoukh teaches the abovementioned limitation (page 1, paragraph 0006) as the system key is used to encrypt the encryption key identification. The encryption key and encryption key identification are stored in the key database. The system key common name hash value is stored with the system key common name in the key database. Where (page 2, paragraph 10) the system key common name is located using the system key common name hash value and the system key common name is then used to retrieve the system key. The system key is then used to decrypt the encryption key identification, which in turn used to locate the encryption key.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to incorporate teachings of Madoukh into the system of Cane to prevent unauthorized access to the data, as the encryption key identifiers and system key common name are included in the data entities.

With respect to claim 4, it is noted that Cane does not explicitly teach the limitation of “data to match the encrypted file to the data necessary to generate a decryption key is written to the encryption key database upon uploading.”

On the other hand, Madoukh teaches the abovementioned limitation (page 1, paragraph 0005) as the information database is further operable to store the encryption key identification in association with the data entity.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to incorporate teachings of Madoukh into the system of Cane to prevent unauthorized access to the data, as the encryption key identifiers and system key common name are included in the data entities.

With respect to claim 5, Cane does not explicitly teach the limitation of “the storage device includes a file encryption key database, wherein the file encryption key is written to the file encryption key database upon uploading.”

On the other hand, Madoukh discloses the abovementioned limitation (page 1, paragraph 0006) as the encryption key and encryption key identification are stored in the key database.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to incorporate teachings of Madoukh into the system of Cane to prevent unauthorized access to the data, as the encryption key identifiers and system key common name are included in the data entities.

With respect to claim 9, it is rejected in view of the same reasons as stated in the rejection of claim 5.

With respect to claim 10, it is rejected in view of the same reasons as stated in the rejection of claim 4.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cane et al. (US 5,940,506) in view of Horne et al. (US 4694,491) and further in view of Madoukh (US 2001/0019614 A1).

With respect to claim 6, it is noted that Cane does not explicitly teach the limitation of “an identifier is written to a header of the file and to the file encryption key database upon uploading to associate the file encryption key with the encrypted file.”

On the other hand, Horne teaches the limitation of “an identifier is written to a header of the file” (column 7, lines 62-64) as the encryption key number I transmitted to all receivers at the same time in the header portion of the control data stream.

In addition, Madoukh teaches the limitation of “an identifier is written to the file encryption key database” (page 1, paragraph 0005) as the information database is further operable to store the encryption key identification in association with the data entity.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to combine teachings of Cane with teachings of Horne and Madoukh to

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prevent unauthorized access to the data, as the encryption key identifiers and system key common name are included in the data entities.

8. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cane et al. (US 5,940,506) in view of Lambert et al (US 6,282,649 B1).

With respect to claim 12, it is noted that Cane does not explicitly disclose the limitation of “a computer program comprising computer program code means for performing all of the steps of any of claims 7 to 11 when said program is run on a computer.”

On the other hand, Lambert discloses the abovementioned limitation (column 2, line 66 - column 3, line 3) as the invention may be implemented as a computer program product comprising computer readable program code stored on a computer readable storage medium.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to incorporate teachings of Lambert into the system of Cane to make the invention more portable.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- a. Kara (US 5,802,175), Computer File Backup Encryption System and Method

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- b. Kohl et al. (US 2002/0091930 A1), System and Method to Securely Store Information in a Recoverable Manner on an Untrusted System.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KONSTANTIN SHEPELEV whose telephone number is (571)270-5213. The examiner can normally be reached on Mon - Thu 8:30 - 18:00, Fri 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on (571)272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Konstantin Shepelev/
Examiner, Art Unit 2131
/Ayaz R. Sheikh/
Supervisory Patent Examiner, Art Unit 2131

08/05/2008